REMARKS/ARGUMENTS

Claims 1-4, 6-8, and 12-16 have been canceled, leaving Claims 5 and 9-11 pending. Claims 5 and 9-11 are drawn to a forming tube formed of paperboard or other fibrous material, wherein the fibrous material is sized to render the tube impervious to liquid but pervious to vapors generated during the drying of the coating material applied to glass fibers wound onto the tube.

Claims 5 and 9-11 were rejected as unpatentable over U.S. Patent No. 3,323,751 to Cunningham et al. in view of U.S. Patent No. 5,710,853 to Von Hoessle et al. and U.S. Patent No. 5,762,643 to Ray et al.

The Office Action asserts that it would have been obvious to have used the resin coating of Ray et al. as the coating resin of Cunningham et al. to allow faster drying of the glass fibers as taught by Von Hoessle et al.

Applicant respectively disagrees with the rejections. None of the three cited references has any teaching of a paperboard or other fibrous material treated with sizing to render the fibrous material impervious to liquid but pervious to vapors as claimed. In this regard, it is important to understand the term "sizing" as understood by persons of ordinary skill in the art of papermaking. The Examiner's attention is directed to the definition of "sizing" provided by PulpandPaper-Technology.com, at the URL http://www.pulpandpaper-technology.com/glossary/paper-sizing.html:

> "Sizing is a treatment process for paper whereby a solution is added to the paper which makes it less absorbant and improves it's strength. There are a number of types of sizing, including internal sizing, external or surface sizing, acid sizing, beater or engine sizing."

Various sizing agents are known in the papermaking art, including alkenyl succinic anhydride (ASA), alkyl ketene dimer (AKD), rosin with alum, and others.

Turning to Cunningham, it discloses a forming tube for glass fiber, comprising a wound paper tube having a resin-impregnated non-woven textile material spirally wound over the paper tube. The purpose of the resin-impregnated non-woven textile material is to impart a rough outer surface to the forming tube and to give the tube greater strength while remaining flexible. The "resin" disclosed by Cunningham would be understood by those skilled in the art to be very different from the "sizing" recited in the present claims. Furthermore, there is nothing in Cunningham suggesting that the tube having the resin-impregnated textile material would be pervious to vapors.

Von Hoessle discloses a "coil form" or forming tube **4** onto which fiber optic waveguide, or glass fibers, are wound into a coil or winding. Von Hoessle notes the problem of the solvent in liquid binding agent applied to the glass fibers forming a diffusion-inhibiting barrier layer (i.e., an adhesive or lacquer film) on the outside of the coil form, which prevents the further diffusion of the solvent from the interior of the winding and leads to other potential problems. To overcome this problem, Von Hoessle proposes a coil form that is formed of a solvent-permeable porous material having a coefficient of thermal expansion and a diffusion coefficient for the solvent that are substantially the same as those of the glass fiber winding so that the solvent can diffuse through the coil form. Preferably, the coil form is made of ceramic such as silicon nitride or aluminum oxide. It is clear that Von Hoessle does not disclose a forming tube that includes paperboard treated with a sizing compound as claimed.

Additionally, there would not have been any motivation to modify Cunningham by anything that Von Hoessle teaches because Von Hoessle's objectives are entirely different from those of Cunningham. Cunningham desires a rough outer surface and improved strength while retaining flexibility of the yarn tube. None of these considerations are relevant to Von Hoessle's development, and modifying Cunningham's yarn tube based on Von Hoessle would compromise the achievement of Cunningham's objectives.

Ray is directed toward a vapor-permeable, liquid-impermeable composite material comprising a three-dimensional apertured substrate (e.g., a microporous polymer film that is embossed) having a vapor-permeable, liquid-impermeable coating thereon. The coating can comprise a thermoplastic elastomer, a polyvinyl alcohol, an alkaline-soluble polymer, or a water-repellant silicone or fluorine-type coating. The coating can be extrusion-coated onto the substrate. The coatings described by Ray would be understood by those skilled in the art to be substantially different from the sizing compound recited in the present claims.

Moreover, Ray's objectives are entirely different from those of Cunningham, and modifying Cunningham's yarn tube based on Ray would compromise the achievement of Cunningham's objectives. Thus, it would not have been obvious to modify Cunningham based on Ray.

Applicant submits the cited references would not have been combined as asserted in the Office Action in view of the different problems to which the various references are directed. However, even if the three references were somehow combined, they still would not have suggested a forming tube formed of paperboard or other fibrous material, wherein the fibrous material is impervious to liquid but pervious to vapors generated during the drying of the coating material applied to glass fibers wound onto the tube.

For these reasons, it is respectfully submitted that Claims 5 and 9-11 are patentable over the cited references, and the application is in condition for allowance.

The Examiner is invited to telephone the undersigned if there are any further issues that need to be resolved prior to allowance.

Respectfully submitted,

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